



ROBOTiS

ROBOTIC SURGERY SIMULATOR

High-fidelity • Generic • Portable • Cost effective

ROBOTiS is a simulator for **precise hands-on training** in the **fundamentals of robotic surgery**. It reproduces the ergonomics of the leading surgical robots on the market, combined with **ultra-high-fidelity simulation software** to deliver a true-to-life training experience.



+ 40 exercises



Surgeons,
students,
manufacturers



Acquisition,
rental for
training



French,
English



High-fidelity
virtual suturing



Essential and
advanced skills



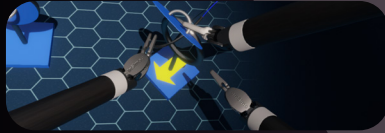
Thread inextensibility & dynamics
Torsion & flexion effects
Real-time identification of any type of knot tying
Support for multiple threads types
Plasticity simulation for shape memory



BASIC MANIPULATION

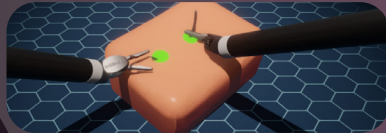
Object Manipulation

Peg Transfer, Clutch control,
Trajectory control,
3rd instrument control,
Camera control



Needle Driving

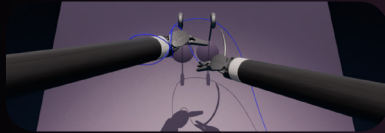
Guided Needle Passing,
Unguided Needle Passing,
Surface Needle Driving,
Volume Needle Driving



KNOT TYING

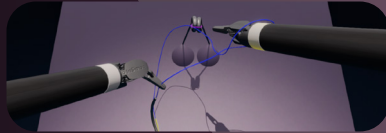
Assisted Needle Holding

Half Knot, Square Knot,
Surgeon Knot



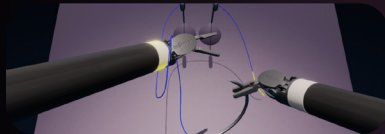
Assisted Thread Holding

Half Knot, Square Knot,
Surgeon Knot



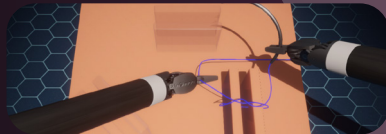
Freehand Tying

Half Knot, Square Knot,
Surgeon Knot



Surface Practice

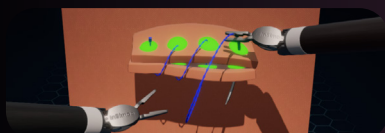
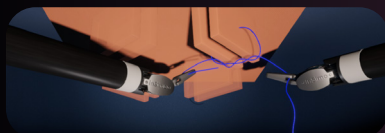
Surface Half Knot,
Surface Surgeon Knot



PROCEDURAL SKILLS

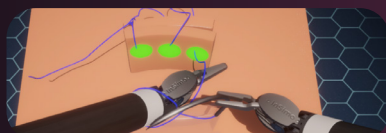
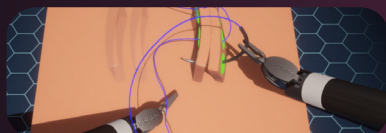
Procedures

Ventral Hernia Repair,
Vaginal Cuff Closure



Anastomosis

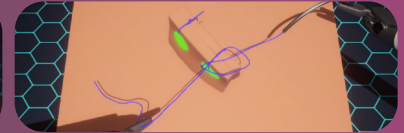
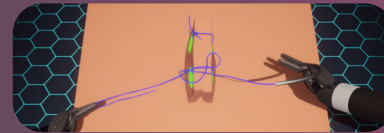
Vertical Anastomosis,
Horizontal Anastomosis



INTERRUPTED SUTURING

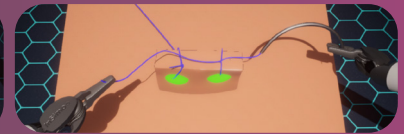
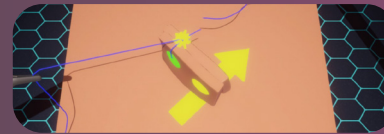
Dual Thread

Forehand Vertical Suturing, Forehand Oblique Suturing,
Backhand Oblique Suturing, Backhand Horizontal Suturing



Single Thread

Forehand Vertical Suturing, Forehand Oblique Suturing,
Backhand Oblique Suturing, Backhand Horizontal Suturing



CONTINUOUS SUTURING

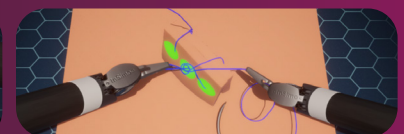
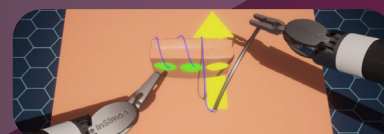
Barbed suture

Needle Driving



Braided suture

Forehand Needle Driving, Backhand Needle Driving,
Continuous Suturing with Knots



HIGH-FIDELITY SUTURING SIMULATION



**Inextensible &
dynamic thread**

Realistic
simulation of
thread physics,
including
memory foam



**Precise
control**

Surgical
interactions
simulated with
precision &
fidelity



**Educational
value**

Real-time
visual force
feedback to
guide tissue
manipulation



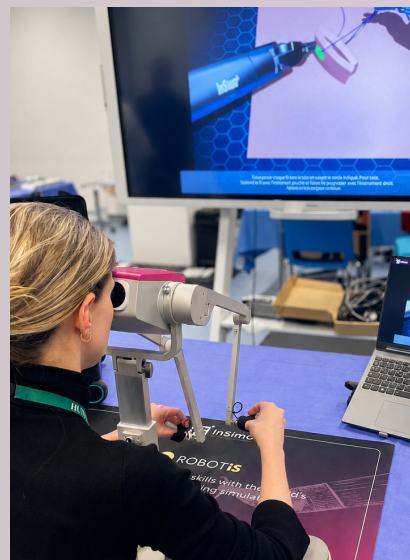
ROBOTiS KEY BENEFITS

High-fidelity · Generic · Portable · Cost effective



COMPACT & ACCESSIBLE

Easily transportable, ROBOTiS can be set up on any table in less than 5 minutes



UNIVERSAL & HIGH-FIDELITY

Accurate & realistic simulation to address the challenges of surgical training without force feedback



Compact and portable simulator



Among the most cost-effective



Training anywhere, even outside the OR



Inextensible thread simulation



Ultra-high-fidelity virtual suturing



Real-time recognition of all knot types

Pr Louis Sibert

President of SoFraSimS, Medical Director of the MTC in Rouen, France



"Compared to other robotic surgery simulators, ROBOTiS stands out for its portability, allowing it to go directly to students and avoiding scheduling constraints or the need to free up staff."

Furthermore, the simulator's focus on suturing is a considerable advantage, combining ergonomic design with particularly advanced technology."

Edoardo Fazzari, PhD

Postdoctoral Researcher MBZUAI University, Abu Dhabi



"When I started using ROBOTiS, I noticed how simple it was. Moreover, it offers a wide range of exercises, from basic skills to more advanced manipulation tasks. The rendering of the tissues looks like real human organs."

I highly recommend this simulator, as it is portable, affordable, with a simple interface and a lot of tasks."